EXHIBIT 4

COST REDUCTION TECHNOLOGIES



Criterion-Related Validation of CRT's Isokinetic Test

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Introduction and Background

The sections that follow describe the criterion-related validation study that empirically linked the use of Cost Reduction Technologies' (CRT) isokinetic test to a decrease in the rate of on-the-job injuries. More specifically, this study utilized archival data in order to determine if participation in CRT's testing process reduced the rate at which injuries occurred on the job. This determination was made by analyzing data from two separate companies via different statistical tests.

In early 2017, CRT delivered, to DCI Consulting, personnel hiring and injury files for two companies: Company A and Company B. Company A is an organization in the trucking industry that operates over 900 temperature-controlled trailers. Company B operates in the same industry and performs similar work when compared to Company A. Company A has been using isokinetic testing since May 6, 2013, while Company B has been using it since June 2, 2014.

Outcome Data

The injury files included all compensated injuries during March 2011 through February of 2016. Included injuries were not necessarily of the type that would be expected to be predicted by the CRT test; thus, it was necessary to identify the subset of injuries relevant to the strength measurements provided by the CRT test.

Company A provided two files, one with all injuries occurring before testing was implemented and one with all injuries occurring after testing had been implemented. The file prior to testing contained claim numbers for each injury, names, dates of injuries, hire dates, tenure at time of injury, cost associated with each injury, and a description of the injury. This description included the body part affected, a short description of the injury's context, the cause of injury (and its code), and the nature of the injury (e.g., strain, laceration, fracture) and its code. The second file contained the same information in addition to a field with gender and a field that noted if an individual had been tested by CRT. Individuals were either tested, not tested, or tested as an incumbent (i.e. current employee tested for a baseline measure).

Company B provided one injury file. It contained names, gender, birthdate, race, injury occurrence date, cost associated with the injury, the body part affected, the nature of the injury (e.g., strain, motor vehicle accident, etc.), the cause of the injury, a description of the injury's context, and columns describing the connection to Department of Labor strength categories (these cells were almost completely missing).

As noted earlier in this manual, the CRT test is designed to measure muscle strength levels associated with the knees, shoulders, and trunk, which can be classified according to job requirement levels defined by the Department of Labor. Furthermore, the test is intended to prevent overexertion/repetitive motion strains and sprains as opposed to other injuries such as lacerations. In other words, overexertion/repetitive motion strains and sprains are relevant to CRT's testing, while injuries such as lacerations are irrelevant to CRT's testing. Using that definition, CRT classified the injuries in both Company A and Company B's files as either relevant to CRT testing (e.g. suffering a shoulder strain while lifting) or irrelevant to CRT testing (e.g. experiencing whiplash as a result of a traffic accident). Of the total 235 injuries listed in the Company A files, 65 were classified as relevant to CRT testing. Three of the total 21 injuries listed in the Company B file were classified as relevant to CRT testing.

To help ensure the validity of the outcome data being analyzed as part of the validation study, two DCI consultants² reviewed the injury data independently (and blind to the categorization by CRT) to identify the injuries judged relevant to CRT's test. The consultants then met to review the ratings. By and large, the consultants had the same categorization, and where they differed, they discussed the characteristics of the injury to arrive at consensus determination of how to categorize. Once differences were resolved through consensus discussion, the consultants compared their categorization to CRT's. In a small number of cases, an injury was categorized as relevant to the CRT test by DCI or CRT but not by both³. DCI conducted analyses using both the CRT and DCI injury categorization determinations.

Predictor Data

DCI also received hiring data from the companies for the injury data time periods. Company A's hire file contained 2424 entries. It listed name, hire date, termination date, position, gender, and birthdate. There were many positions, but only Driver, Local Driver, and NBB Local Drivers were used in analyses. The hire dates ranged from March of 2011 to February of 2016. The Company B file contained 887 entries. It also listed race, sex, birthdate, and hire date. The hire dates ranged from 1977 to 2017.

¹ Rob Teitsma, Vice President of Business Development, coded injuries.

² Kayo Sady, PhD and Cliff Haimann, PhD coded injuries.

³ For company A, DCI coded 75 injuries as relevant to CRT's testing. Of those 75, CRT coded 59 as relevant and 16 as irrelevant. DCI also coded 160 injuries as irrelevant to CRT's testing. Of those 160, CRT coded 154 as irrelevant to testing and 6 as relevant to testing. For company B, DCI coded 7 injuries as relevant to CRT's testing. Of those 7, CRT coded 3 as relevant and 4 as irrelevant to testing. DCI coded 14 injuries as irrelevant to testing, and CRT coded those 14 as irrelevant to testing.

Merging Data

In order to evaluate whether CRT testing was systematically related to relevant injuries, it was necessary to merge the relevant injury outcomes to the data indicating who was hired during the relevant time period. After merging the datasets, duplicate entries were removed to ensure that each individual only had one entry that stated whether he or she had experienced an overexertion/repetitive motion injury during the relevant time period⁴.

For Company A, the injuries had occurrence date and hire date, but they often did not have age and gender, and they did not have position or termination date. Therefore, duplicate names across injury and hire files were scrutinized, and if a name in the injury file was listed in the hire data, and the hire dates matched, this injury was deemed a match to the entry in the hire data. The age, gender, termination date, and position listed in the hire data were then assigned to this injury. Furthermore, the hire file entry was marked for removal from analysis to ensure that this person only had one entry. In some cases, individuals in the injury data had multiple relevant injuries, so only one entry was kept for these individuals. Moreover, there were other anomalies. For example, some ages were below 18, so these people were marked for removal in both the injury and hire files. In some instances, individuals had injury occurrence dates that preceded hire dates, so entries associated with these anomalies were marked for removal. In another instance, an individual in the hire file had two entries with the same name and hire date; however, the two entries had different ages. As a result, these two entries were removed. Appendix A lists the IDs for individuals⁵ who had entries removed, the number of entries removed, and the rational for removal. Overall, 163 entries were removed, and 96 injury entries could not be completely matched to the hire file (they were retained in the final dataset)⁶. These 96 entries did not have complete age data, so they were not included in any analyses that used age, but they were included in analyses that excluded age. After removal of duplicates, the dataset contained 2496 individuals. There were 72 injuries coded by DCI as relevant and 61 injuries coded by CRT as relevant. Table 1 and Table 2 provide information about the sample size of the various Company A files along with the characteristics of the final data set that included only the relevant population of drivers.

⁴ Some individuals had multiple injuries, and analyses discussed later address the use of these multiple entries.

⁵ DCI created these IDs and has matched them to the employees.

⁶ DCI consulted with CRT and later obtained the positions for all of those who were on the injury list; however, CRT did not provide additional age information. Age values are missing for these individuals, but they could still be analyzed because their position and hire dates were known.

For Company B, injury entries did not have hire dates, so they were matched to the hire data by using duplicate names, ages, and genders. In other words, if a name in the injury data matched a name in the hire data, and the ages and genders were the same for the two entries, these individuals were deemed a match. The hire date from the hire data was placed with the injury. Like the other organization, any duplicates were removed so each individual only had one entry. Further, like above, there were some anomalies. For example, one individual in the hire file had two entries with the same name, age, and gender but different hire dates. This person's entries were removed. Appendix A lists how many entries were removed along with reasons for the removal. Three injury entries could not be matched to the hire file. Overall, the final file (after removal of duplicates) contained 879 individuals. There were six DCI-coded relevant injuries, and three CRT-coded relevant injuries. **Table 1** and **Table 3** present the sample sizes of the various files and characteristics of the final dataset used in analyses.

Analysis

DCI conducted multiple analyses to test the general hypothesis that CRT testing results in lower rates of preventable injuries for jobs that require the use of physical abilities

Company A. First, DCI conducted various analyses on Company A's data to determine if there was an association between being tested and presence of a relevant injury. To do this, the DCI-coded injuries and CRT-coded injuries were treated as separate outcomes and used in separate analyses.

In terms of tested status, two separate variables were created. For the first, those hired before the implementation of testing on May 6, 2013 were deemed not tested, while those hired after were considered tested. For the second variable, information from the injury file was utilized to describe tested status. As noted before, some of the entries from the injury file had information that stated whether individuals had been tested; however, this injury file information did not always align with the tested status variable that was based on the May 2013 test implementation date. For example, consider one individual in the injury file who was hired before May of 2013. Based on the test implementation date, this person would be labeled not tested; however, this individual's injury file data showed that testing had occurred, which would mean conflicting information for tested status. Therefore, in addition to a tested status variable based on test implementation date, a

⁷These three had injury occurrence dates, so it was still possible to determine if they had been hired before or after the implementation of testing.

second tested status variable was created that used data from the injury file in order to identify an individual's tested status (the second variable is called the Injury-File Tested-Status Variable). As a result, any analysis that was run always had four different variations:

- 1. DCI-coded injury with tested variable based on the test implementation date;
- 2. DCI-coded injury with tested variable that used entries from the injury file (Injury-File Tested-Status Variable);
- 3. CRT-coded injury with tested variable based on the test implementation date; and
- 4. CRT-coded injury with tested variable that used entries from the injury file (Injury-File Tested-Status Variable).

As noted earlier, only Drivers, Local Drivers, and NBB Local Drivers were included in the analyses.

DCI conducted the following analyses to examine the association between tested status and presence of an injury. They each utilized the four variations described above.

- Chi-square test with presence of injury (Injury is present/Injury is not present) and tested status;
- Logistic regression that predicted the presence of injury with individuals' tested statuses;
 and
- Logistic regression that predicted the presence of injury with age, gender, and tested status.

DCI also conducted an analysis to evaluate the number of injuries incurred by an individual over his or her tenure. For this, the number of injuries for each individual was added together, and this value was divided by tenure (in years), which resulted in the number of injuries incurred per year. This coding applied to both the CRT coded injuries and the DCI coded injuries. In the rare instance that an individual was hired and terminated on the same day, that was treated as a tenure of 1 day as opposed to 0 days. Given that most people had injury counts of 0 and that the data were highly skewed, the injury per year variable was dichotomized into those equal to or above the mean of the injury per year variable and those less than the mean. A chi-square test between tested status and relation to the mean was evaluated.

Last, DCI included all injuries incurred and compared the average cost of an injury for those who were not tested to the average cost of an injury for those who were tested. Cohen's D statistics were produced to evaluate the magnitude of the difference, and Mann-Whitney U tests were used because of the small sample size and presence of extreme values or outliers.

Company B. The number of injuries present in the Company B data was minimal. Given this limitation, comparatively fewer analyses were run on this data. Specifically, a Fisher's Exact Test was used, which evaluated the relationship between tested status and presence of an injury. This analysis was run using the DCI-coded injury variable and the CRT-coded injury variable. Those hired before the implementation of testing were deemed not tested, while those hired after the implementation of testing were labeled as tested.

Both Companies. For some analyses, DCI combined Company A and Company B data. Given the inclusion of Company A data, the four variations described above were examined using the following analyses:

- Logistic regression predicting the presence of injury with a company control variable and tested status; and
- Logistic regression predicting the presence of injury with a company control variable, age, gender, and tested status.

Since the Company B data file contained some who were hired before the relevant injury period, these individuals were removed, and the combined company analyses above were run again as a follow up. Last, DCI also conducted the following analyses on age and gender to determine if there were subgroup differences in injury rates:

- Logistic regression predicting the presence of DCI-coded injury with a company control variable and age;
- Logistic regression predicting the presence of DCI-coded injury with a company control variable and gender;
- Logistic regression predicting the presence of DCI-coded injury a with company control variable, gender, and age;
- Logistic regression predicting the presence of CRT-coded injury with a company control variable and age;
- Logistic regression predicting the presence of CRT-coded injury with a company control variable and gender; and
- Logistic regression predicting the presence of CRT-coded injury with a company control variable, gender, and age.

Results

Company A. Table 4 shows the relationship between tested status (based on the test implementation date) and presence of DCI-coded injury. It demonstrates that those who are tested have a lower proportion of injuries compared to those who are not tested. This result is statistically significant. Based on the results, those <u>not tested</u> are 3.85 times more likely to be injured compared to those who are tested. This finding is displayed in **Exhibit 1**:

Exhibit 1

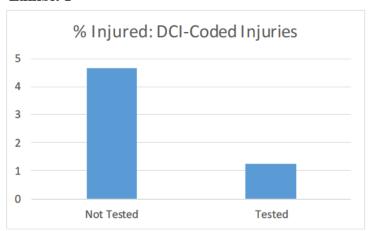


Table 5, which uses the Injury-File Tested-Status Variable, presents the same pattern that is statistically significant. In this case, those who are not tested are 4.96 times more likely to be injured compared to those who are tested. This is presented in **Exhibit 2**.

Exhibit 2

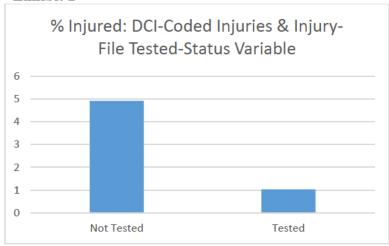


Table 6 and **Table 7** show the same analyses for the CRT-coded injury variable. The findings support the same statistically significant patterns. For the tested variable based on test implementation date, those not tested are 3.89 times more likely to be injured compared to those who are tested. For the Injury-File Tested-Status Variable, those not tested are 3.44 times more likely to be injured. **Exhibit 3** through **Exhibit 4** depict these differences in proportions.

Exhibit 3

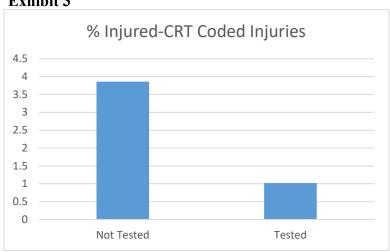


Exhibit 4

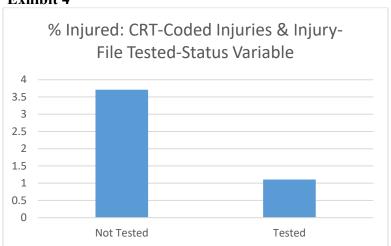


Table 8 shows the results of a logistic regression predicting the presence of DCI-coded injuries. The only predictor is tested status (based on test implementation date). The table shows that one who is tested is less likely to have an injury, and this result is statistically significant. In **Table 9**, the same analysis is highlighted except the Injury-File Tested-Status Variable is used. Again, those tested have a lower likelihood of being injured, and this result is statistically

significant. **Table 10** and **Table 11** offer the same analyses for the CRT-coded injury variable. For both tables, being tested reduces the likelihood of injury, and this result is statistically significant.

Table 12 provides the logistic regression predicting the presence of DCI injury with age, gender, and tested status (based on test implementation date). The results show that even when controlling for age and gender, those tested have a lower likelihood of injury than those who are not tested. This outcome is statistically significant. The results in Table 13, which uses the Injury-File Tested-Status Variable, demonstrate the same statistically significant finding. Table 14 uses the CRT-coded injury variable, and it provides the same statistically significant results as the previous two tables. Table 15, which uses the Injury-File Tested-Status Variable, presents the same pattern in that testing reduces the likelihood of injury; however, the result is not statistically significant.

Turning to the number of injuries during one's tenure, all individuals with multiple injuries were not tested (i.e., two injuries was the maximum for any individual). **Table 16** provides the chi-square test result for tested status and relation of injury per year relative to the mean. The result is for DCI-coded injuries, and it shows that those not tested have a larger percentage of individuals equal to or above the mean. This result is statistically significant. **Table 17**, which uses the Injury-File Tested-Status Variable, displays the same statistically significant pattern of results. **Tables 18** and **19** offer the same analyses for CRT-coded injuries. In both instances, the same statistically significant pattern emerges.

The final analysis for Company A centered on a comparison of average injury cost for those tested and those not tested. **Table 20** shows the means, number of injuries, Cohen's D value, and Mann Whitney p value for the four analysis variations used on the Company A data. When considering the DCI-coded injuries and the tested variable based on test implementation date, those not tested have higher injury costs, and this result is statistically significant. For DCI-coded injuries and the Injury-File Tested-Status Variable, those not tested have higher injury costs, but the result is not significant.

For CRT-coded injuries and the tested variable based on test implementation date, those not tested have higher injury costs, and the result is statistically significant. The same is the case when the Injury-File Tested-Status Variable is used. The Cohen's D effect sizes for all injuries range from small to medium (Cohen, 1988).

Company B. Table 21 and Table 22 show the Fisher's Exact Test for Company B. For DCI-coded injuries, those tested have a lower proportion of injuries compared to those not tested. This result is statistically significant. The same pattern emerges for CRT coded injuries; however, the result is not statistically significant.

Both Companies. Table 23 presents the logistic regression predicting the presence of DCI-coded injury with company control and tested status (based on test implementation date). The results show that Company A employees have a higher likelihood of injury and that being tested reduces the likelihood of injury. Both results are significant. Table 24 displays the logistic regression that uses the Injury-File Tested-Status Variable. The results are the same as the previous table. Table 25 and Table 26 provide the same analyses as the previous two tables except CRT-coded injury is predicted. The pattern of the results and significance are the same. In other words, for all variations examined, Company A employees have a higher likelihood of injury, and those tested have a lower likelihood of injury compared to those not tested.

Tables 27, 28, 29, and 30 present the results for the same logistic regressions as Tables 23-26 except age and gender have now been added as control variables. All tables show the same pattern of significant results. When controlling for company, age, and gender, those tested have a lower likelihood of injury compared to those who are not tested. For these tables, Company A employees also have a higher likelihood of injury.

Given the existence of some Company B employees hired before the injury time periods, they were removed, and the analyses from **Table 23** through **Table 30** were run again. **Tables 31** through **38** present the results. Overall, the pattern of results and significance remains consistent. When predicting DCI-coded or CRT-coded injury and controlling for company, those tested have a lower likelihood of injury compared to those who are not tested, and this finding is statistically significant. When predicting DCI-coded injury or CRT-coded injury and controlling for company, age, and gender, those tested have a lower likelihood of injury compared to those who are not tested, and this result is statistically significant. Last, in all tables, Company A employees have a higher likelihood of injury at a statistically significant rate.

Table 39 presents the results of a logistic regression predicting DCI-coded injury with a company control variable and age. As can be seen, employees of Company A have a higher likelihood of injury at a statistically significant rate, while age is not a significant predictor. **Table 40** gives the same regression except gender is used instead of age. Again, those in Company A

have higher likelihood of injury, but gender is not a significant predictor. **Table 41** gives the regression that uses both age and gender along with company. Neither of the demographic variables are significant, and the same statistically significant result for company remains.

Tables 42, 43, and 44 provide the same logistic regressions as above; however, CRT-coded injury is now predicted. In all three tables, those at Company A have a higher likelihood of injury compared to those at Company B (this is statistically significant), and gender is not a significant predictor. When age is used as a predictor, however, it is significant, and the results show that aging increases the likelihood that one becomes injured.

Conclusions

DCI conducted many analyses on the injury data using injuries coded by separate parties at different organizations. After performing the various analyses and looking at multiple subsets of the data, the preponderance of evidence suggests that testing reduces the likelihood of injury. Moreover, the fact that different evaluators coded injuries and that results were consistent across the coded outcomes supports the fact that injuries can be reliably identified and recognized by different individuals.

Given the number of injuries in the Company B data, only a small subset of analyses were performed on them; however, despite the small sample, there is some evidence that injury rates are lower for those who are tested as opposed to not tested. When Company B data are combined with Company A data and company is used as a control, there is evidence that testing relates to fewer injuries, and this is the case when controlling for age and gender. In fact, age by itself relates to more injuries, however, when used as a predictor alongside tested status, age is no longer a significant predictor, which ultimately highlights the influence of testing.

References

Cohen, J. (1988). Statistical power analysis for the behavioral sciences (2nd ed.). Hillsdale, NJ: Lawrence Earlbaum Associates.

Appendix and Tables

Appendix A: Entries Removed

| Company | DCI ID | # of Entries Removed | Reason for Removal | |
|-----------|--------|----------------------------|--|--|
| Company A | 1 | 1 | Duplicate entry, same name and hire date | |
| Company A | 2 | 4 | Duplicate entry, same name and hire date | |
| Company A | 3 | 3 | Duplicate entry, same name and hire date | |
| Company A | 4 | 2 | Duplicate entry, same name and hire date | |
| Company A | 5 | 2 | Duplicate entry, same name and hire date | |
| Company A | 6 | 2 | Duplicate entry, same name and hire date | |
| Company A | 7 | 2 | Duplicate entry, same name and hire date | |
| Company A | 8 | 1 | Duplicate entry, same name and hire date | |
| Company A | 9 | 2 | Duplicate entry, same name and hire date | |
| Company A | 10 | 2 | Occurrence before hire date | |
| Company A | 11 | 2 | Duplicate entry, same name and hire date | |
| Company A | 12 | 2 | Duplicate entry, same name and hire date | |
| Company A | 13 | 2 | Duplicate entry, same name and hire date | |
| Company A | 14 | 2 | Occurrence before hire date | |
| Company A | 15 | 1 | Duplicate entry, same name and hire date | |
| Company A | 16 | 2 | Duplicate entry, same name and hire date | |
| Company A | 17 | 2 | Duplicate entry, same name and hire date | |
| Company A | 18 | 2 | Duplicate entry, same name and hire date | |
| Company A | 19 | 2 | Duplicate entry, same name and hire date | |
| Company A | 20 | 2 | Occurrence before hire date | |
| Company A | 21 | 2 | Duplicate entry, same name and hire date | |
| Company A | 22 | 2 | Duplicate entry, same name and hire date | |
| Company A | 23 | 1 | Duplicate entry, same name and hire date | |
| Company A | 24 | 1 | Duplicate entry, same name and hire date | |
| Company A | 25 | 1 | Duplicate entry, same name and hire date | |
| Company A | 26 | 1 | Duplicate entry, same name and hire date | |
| Company A | 27 | 1 | Duplicate entry, same name and hire date | |
| Company A | 28 | 1 | Duplicate entry, same name and hire date | |
| Company A | 29 | 1 | Duplicate entry, same name and hire date | |
| Company A | 30 | 1 | Duplicate entry, same name and hire date | |
| Company A | 31 | 1 | Duplicate entry, same name and hire date | |
| Company A | 32 | 1 | Duplicate entry, same name and hire date | |
| Company A | 33 | 1 | Duplicate entry, same name and hire date | |
| Company A | 34 | 1 | Duplicate entry, same name and hire date | |
| Company A | 35 | 1 | Duplicate entry, same name and hire date | |
| Company A | 36 | 1 | Duplicate entry, same name and hire date | |

| Company | DCI ID | # of Entries Removed | Reason for Removal | |
|-----------|--------|----------------------------|--|--|
| Company A | 37 | 1 | Duplicate entry, same name and hire date | |
| Company A | 38 | 1 | Duplicate entry, same name and hire date | |
| Company A | 39 | 1 | Duplicate entry, same name and hire date | |
| Company A | 40 | 1 | Duplicate entry, same name and hire date | |
| Company A | 41 | 1 | Duplicate entry, same name and hire date | |
| Company A | 42 | 1 | Duplicate entry, same name and hire date | |
| Company A | 43 | 1 | Duplicate entry, same name and hire date | |
| Company A | 44 | 1 | Duplicate entry, same name and hire date | |
| Company A | 45 | 1 | Duplicate entry, same name and hire date | |
| Company A | 46 | 1 | Duplicate entry, same name and hire date | |
| Company A | 47 | 1 | Duplicate entry, same name and hire date | |
| Company A | 48 | 1 | Duplicate entry, same name and hire date | |
| Company A | 49 | 1 | Duplicate entry, same name and hire date | |
| Company A | 50 | 1 | Duplicate entry, same name and hire date | |
| Company A | 51 | 1 | Duplicate entry, same name and hire date | |
| Company A | 52 | 1 | Duplicate entry, same name and hire date | |
| Company A | 53 | 1 | Duplicate entry, same name and hire date | |
| Company A | 54 | 1 | Duplicate entry, same name and hire date | |
| Company A | 55 | 1 | Duplicate entry, same name and hire date | |
| Company A | 56 | 1 | Duplicate entry, same name and hire date | |
| Company A | 57 | 1 | Duplicate entry, same name and hire date | |
| Company A | 58 | 1 | Duplicate entry, same name and hire date | |
| Company A | 59 | 1 | Duplicate entry, same name and hire date | |
| Company A | 60 | 1 | Duplicate entry, same name and hire date | |
| Company A | 61 | 1 | Duplicate entry, same name and hire date | |
| Company A | 62 | 1 | Duplicate entry, same name and hire date | |
| Company A | 63 | 1 | Duplicate entry, same name and hire date | |
| Company A | 64 | 1 | Duplicate entry, same name and hire date | |
| Company A | 65 | 1 | Duplicate entry, same name and hire date | |
| Company A | 66 | 1 | Duplicate entry, same name and hire date | |
| Company A | 67 | 1 | Duplicate entry, same name and hire date | |
| Company A | 68 | 1 | Duplicate entry, same name and hire date | |
| Company A | 69 | 1 | Duplicate entry, same name and hire date | |
| Company A | 70 | 1 | Duplicate entry, same name and hire date | |
| Company A | 71 | 1 | Duplicate entry, same name and hire date | |
| Company A | 72 | 1 | Duplicate entry, same name and hire date | |

| Company | DCI ID | # of Entries Removed | Reason for Removal |
|-----------|--------|----------------------------|--|
| Company A | 73 | 1 | Duplicate entry, same name and hire date |
| Company A | 74 | 1 | Duplicate entry, same name and hire date |
| Company A | 75 | 1 | Duplicate entry, same name and hire date |
| Company A | 76 | 1 | Duplicate entry, same name and hire date |
| Company A | 77 | 1 | Duplicate entry, same name and hire date |
| Company A | 78 | 1 | Duplicate entry, same name and hire date |
| Company A | 79 | 1 | Duplicate entry, same name and hire date |
| Company A | 80 | 1 | Duplicate entry, same name and hire date |
| Company A | 81 | 1 | Duplicate entry, same name and hire date |
| Company A | 82 | 1 | Duplicate entry, same name and hire date |
| Company A | 83 | 1 | Duplicate entry, same name and hire date |
| Company A | 84 | 1 | Duplicate entry, same name and hire date |
| Company A | 85 | 1 | Duplicate entry, same name and hire date |
| Company A | 86 | 1 | Duplicate entry, same name and hire date |
| Company A | 87 | 1 | Duplicate entry, same name and hire date |
| Company A | 88 | 1 | Duplicate entry, same name and hire date |
| Company A | 89 | 1 | Duplicate entry, same name and hire date |
| Company A | 90 | 1 | Duplicate entry, same name and hire date |
| Company A | 91 | 1 | Duplicate entry, same name and hire date |
| Company A | 92 | 1 | Duplicate entry, same name and hire date |
| Company A | 93 | 1 | Duplicate entry, same name and hire date |
| Company A | 94 | 1 | Duplicate entry, same name and hire date |
| Company A | 95 | 1 | Duplicate entry, same name and hire date |
| Company A | 96 | 1 | Duplicate entry, same name and hire date |
| Company A | 97 | 1 | Duplicate entry, same name and hire date |
| Company A | 98 | 1 | Duplicate entry, same name and hire date |
| Company A | 99 | 1 | Duplicate entry, same name and hire date |
| Company A | 100 | 1 | Duplicate entry, same name and hire date |
| Company A | 101 | 1 | Duplicate entry, same name and hire date |
| Company A | 102 | 1 | Duplicate entry, same name and hire date |
| Company A | 103 | 1 | Duplicate entry, same name and hire date |
| Company A | 104 | 1 | Duplicate entry, same name and hire date |
| Company A | 105 | 1 | Duplicate entry, same name and hire date |
| Company A | 106 | 1 | Duplicate entry, same name and hire date |
| Company A | 107 | 1 | Duplicate entry, same name and hire date |
| Company A | 108 | 1 | Duplicate entry, same name and hire date |

| Company | DCI ID | # of Entries Removed | Reason for Removal | |
|-----------|--------|----------------------------|---|--|
| Company A | 109 | 1 | Duplicate entry, same name and hire date | |
| Company A | 110 | 1 | Duplicate entry, same name and hire date | |
| Company A | 111 | 1 | Duplicate entry, same name and hire date | |
| Company A | 112 | 1 | Duplicate entry, same name and hire date | |
| Company A | 113 | 1 | Duplicate entry, same name and hire date | |
| Company A | 114 | 1 | Duplicate entry, same name and hire date | |
| Company A | 115 | 1 | Duplicate entry, same name and hire date | |
| Company A | 116 | 1 | Duplicate entry, same name and hire date | |
| Company A | 117 | 1 | Duplicate entry, same name and hire date | |
| Company A | 118 | 1 | Duplicate entry, same name and hire date | |
| Company A | 119 | 1 | Duplicate entry, same name and hire date | |
| Company A | 120 | 1 | Duplicate entry, same name and hire date | |
| Company A | 121 | 1 | Duplicate entry, same name and hire date | |
| Company A | 122 | 1 | Duplicate entry, same name and hire date | |
| Company A | 123 | 1 | Duplicate entry, same name and hire date | |
| Company A | 124 | 1 | Duplicate entry, same name and hire date | |
| Company A | 125 | 1 | Duplicate entry, same name and hire date | |
| Company A | 126 | 1 | Duplicate entry, same name and hire date | |
| Company A | 127 | 1 | Duplicate entry, same name and hire date | |
| Company A | 128 | 1 | Duplicate entry, same name and hire date | |
| Company A | 129 | 1 | Duplicate entry, same name and hire date | |
| Company A | 130 | 1 | Duplicate entry, same name and hire date | |
| Company A | 131 | 1 | Duplicate entry, same name and hire date | |
| Company A | 132 | 2 | Same name and hire date but different ages | |
| Company A | 133 | 1 | Duplicate entry, same name and hire date | |
| Company A | 134 | 1 | Duplicate entry, same name and hire date | |
| Company A | 135 | 1 | Duplicate entry, same name and hire date | |
| Company A | 136 | 1 | Duplicate entry, same name and hire date | |
| Company A | 137 | 1 | Duplicate entry, same name and hire date | |
| Company A | 138 | 1 | Age is outside of range | |
| Company A | 139 | 1 | Duplicate entry, same name and hire date | |
| Company A | 140 | 1 | Age is outside of range | |
| Company B | 141 | 2 | Occurrence date before hire date | |
| | | | Unclear when hired and missing more data than | |
| Company B | 142 | 1 | others | |
| Company B | 143 | 2 | Occurrence date before hire date | |
| Company B | 144 | 2 | Occurrence date before hire date | |

| Company | DCI ID | # of Entries Removed | Reason for Removal | |
|-----------|--------|----------------------------|--|--|
| Company B | 145 | 2 | Occurrence date before hire date | |
| Company B | 146 | 2 | Occurrence date before hire date | |
| Company B | 147 | 2 | Same age and name but different hire dates | |
| Company B | 148 | 1 | Duplicate, same name, age, and gender | |
| Company B | 149 | 1 | Duplicate, same name, age, and gender | |
| Company B | 150 | 1 | Duplicate, same name, age, and gender | |
| Company B | 151 | 1 | Duplicate, same name, age, and gender | |
| Company B | 152 | 1 | Duplicate, same name, age, and gender | |
| Company B | 153 | 1 | Duplicate, same name, age, and gender | |
| Company B | 154 | 1 | Duplicate, same name, age, and gender | |
| Company B | 155 | 1 | Duplicate, same name, age, and gender | |
| Company B | 156 | 1 | Duplicate, same name, age, and gender | |
| Company B | 157 | 1 | Age out of range | |
| Company B | 158 | 1 | Duplicate, same name, age, and gender | |
| Company B | 159 | 1 | Duplicate, same name, age, and gender | |
| Company B | 160 | 1 | Duplicate, same name, age, and gender | |
| Company B | 161 | 1 | Duplicate, same name, age, and gender | |
| Company B | 162 | 1 | Duplicate, same name, age, and gender | |
| Company B | 163 | 1 | Duplicate, same name, age, and gender | |

Table 1: Data File Characteristics

| Company A | N |
|--|------|
| Injury File 1 | 84 |
| Injury File 2 | 151 |
| Hire Data | 2424 |
| Removed from Analysis | 163 |
| Total | 2496 |
| Sample Size after Including only Drivers, Local Drivers, and NBB Local Drivers | 2259 |
| Number with complete age and gender | 2185 |
| Company B | N |
| Injury File | 21 |
| Hire Data File | 887 |
| Removed from Analysis | 29 |
| Total | 879 |
| Number with complete age and gender | 879 |

Table 2: Company A Final Data Set Characteristics

| Company A | | | |
|--------------------|------|--|--|
| Total Sample Size | 2259 | | |
| DCI Injuries | 62 | | |
| CRT Injuries | 51 | | |
| # Men | 2187 | | |
| # Women | 72 | | |
| # Drivers | 2244 | | |
| # Local Driver | 1 | | |
| # NBB Local Driver | 14 | | |

Table 3: Company B Final Dataset Characteristics

| Company B | | | |
|-------------------|-----|--|--|
| Total Sample Size | 879 | | |
| DCI Injuries | 6 | | |
| CRT Injuries | 3 | | |
| # Men | 826 | | |
| # Women | 53 | | |

Table 4: Relationship Between Tested Status and Presence of DCI-Coded Injury: Company A

| Tested Status | No Injury | Injury | Total |
|----------------------|-----------|--------|-------|
| Not Tested | 938 | 46 | 984 |
| Tested | 1259 | 16 | 1275 |
| Total | 2197 | 62 | 2259 |

$$X^2=24.33$$
, df = 1, p = .00

Table 5: Relationship Between Tested Status (Injury-File Tested-Status Variable) and DCI-

Coded Injury: Company A

| Tested Status | No Injury | Injury | Total |
|---------------|-----------|--------|-------|
| Not Tested | 948 | 49 | 997 |
| Tested | 1249 | 13 | 1262 |
| Total | 2197 | 62 | 2259 |

$$X^2=31.48$$
, df = 1, p = $.00$

Table 6: Relationship Between Tested Status and CRT-Coded Injury: Company A

| Tested Status | No Injury | Injury | Total |
|----------------------|-----------|--------|-------|
| Not Tested | 946 | 38 | 984 |
| Tested | 1262 | 13 | 1275 |
| Total | 2208 | 51 | 2259 |

$$X^2=20.33$$
, df = 1, p = .00

Table 7: Relationship Between Tested Status (Injury-File Tested-Status Variable) and CRT-

Coded Injury: Company A

| Tested Status | No Injury | Injury | Total |
|----------------------|-----------|--------|-------|
| Not Tested | 960 | 37 | 997 |
| Tested | 1248 | 14 | 1262 |
| Total | 2208 | 51 | 2259 |

$$X^2=17.09$$
, df = 1, p = .00

Table 8: Predicting the Presence of DCI-Coded Injury: Company A

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -3.015 | 0.151 | -19.966 | 0.000 | 0.049 |
| Tested | -1.350 | 0.293 | -4.602 | 0.000 | 0.259 |

 $X^2 = 24.62$, df =1, p =.00; Nagelkerke R Squared = .048; N = 2259; For Tested, 1= tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present.

Table 9: Predicting the Presence of DCI-Coded Injury with Injury-File Tested-Status Variable:

| Variable | Estimate | Std. Error | Z Value | P Value | e^{B} |
|-------------------------|----------|---------------|---------|---------|---------|
| (Intercept) | -2.963 | 0.147 | -20.222 | 0.000 | 0.052 |
| Tested (Injury File) | -1.603 | 0.315 | -5.089 | 0.000 | 0.201 |

 $X^2 = 32.48$, df = 1, p = .00; Nagelkerke R Squared = .064; N = 2259; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 10: Predicting the Presence of CRT-Coded Injury: Company A

| Variable | Estimate | Std. Error | Z Value | P Value | e^{B} |
|-------------|----------|---------------|---------|---------|---------|
| (Intercept) | -3.215 | 0.165 | -19.430 | 0.000 | 0.040 |
| Tested | -1.361 | 0.324 | -4.198 | 0.000 | 0.256 |

 $X^2 = 20.59$, df = 1, p = .00; Nagelkerke R Squared = .047; N = 2259; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present.

Table 11: Predicting the Presence of CRT-Coded Injury with Injury-File Tested-Status Variable: Company A

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|----------------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -3.26 | 0.17 | -19.43 | 0.00 | 0.04 |
| Tested (Injury File) | -1.23 | 0.32 | -3.90 | 0.00 | 0.29 |

 $X^2 = 17.27$, df = 1, p = .00; Nagelkerke R Squared = .039; N = 2259; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 12: Predicting the Presence of DCI-Coded Injury with Control Variables and Tested Variable: Company A

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|------------|---------|---------|----------------|
| (Intercept) | -19.309 | 767.621 | -0.025 | 0.980 | 0.000 |
| Age | 0.023 | 0.016 | 1.448 | 0.148 | 1.023 |
| Gender | 14.548 | 767.621 | 0.019 | 0.985 | 2080703.655 |
| Tested | -0.856 | 0.353 | -2.424 | 0.015 | 0.425 |

 $X^2 = 12.56$, df = 3, p = .01; Nagelkerke R Squared = .036; N = 2185; For Gender, Female is the reference category; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 13: Predicting the Presence of DCI-Coded Injury with Control Variables and Injury-File

Tested-Status Variable: Company A

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|----------------------|----------|------------|---------|---------|----------------|
| (Intercept) | -19.013 | 759.654 | -0.025 | 0.980 | 0.000 |
| Age | 0.020 | 0.016 | 1.271 | 0.203 | 1.021 |
| Gender | 14.503 | 759.654 | 0.019 | 0.985 | 1988530.954 |
| Tested (Injury File) | -1.228 | 0.378 | -3.245 | 0.001 | 0.293 |

 $X^2 = 18.33$, df = 3, p = .00; Nagelkerke R Squared = .052; N = 2185; For Gender, Female is the reference category; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 14: Predicting the Presence of CRT-Coded Injury with Control Variables and Tested Variable: Company A

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|------------|---------|---------|----------------|
| (Intercept) | -19.625 | 764.017 | -0.026 | 0.980 | 0.000 |
| Age | 0.030 | 0.019 | 1.603 | 0.109 | 1.030 |
| Gender | 14.267 | 764.016 | 0.019 | 0.985 | 1571084.322 |
| Tested | -0.961 | 0.414 | -2.324 | 0.020 | 0.383 |

 $X^2 = 12.24$, df=3, p = .01, Nagelkerke R Squared = .043; N = 2185; For Gender, Female is the reference group; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 15: Predicting the Presence of CRT-Coded Injury with Control Variables and Injury-File Tested-Status Variable: Company A

| Variable | Estimate | Std. Error | Z Value | P Value | e^{B} |
|----------------------|----------|------------|---------|---------|-------------|
| (Intercept) | -19.795 | 767.534 | -0.026 | 0.979 | 0.000 |
| Age | 0.031 | 0.019 | 1.689 | 0.091 | 1.032 |
| Gender | 14.282 | 767.533 | 0.019 | 0.985 | 1594262.078 |
| Tested (Injury File) | -0.768 | 0.403 | -1.904 | 0.057 | 0.464 |

 $X^2 = 10.22$, df = 3, p = .02, Nagelkerke R Squared = .036; N = 2185; For Gender; Female is the reference category; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 16: Association between Tested Status and Location Relative to Mean of Injuries per Year:

DCI-Coded Injuries

| | Less than Mean | Greater Than or Equal to Mean | | | |
|--------------------------------|----------------|----------------------------------|--|--|--|
| Not Tested | 891 | 24 | | | |
| Tested | 1256 | 14 | | | |
| $X^2 = 7.20$, df = 1, p = .01 | | | | | |

Table 17: Association Between Tested Status (Injury-File Tested-Status Variable) and Location

Relative to the Mean of Injuries per Year: DCI-Coded Injuries

| | Less than Mean | Greater Than or Equal to Mean | | | |
|---------------------------------|----------------|----------------------------------|--|--|--|
| Not Tested | 901 | 27 | | | |
| Tested | 1246 | 11 | | | |
| $X^2 = 12.93$, df = 1, p = .00 | | | | | |

Table 18: Association between Tested Status and Location Relative to Mean of Injuries per Year:

CRT-Coded Injuries

| CITI Coucu II | garres | | | | |
|-------------------------------------|----------------|-------------------------------|--|--|--|
| | Less than Mean | Greater Than or Equal to Mean | | | |
| Not Tested | 896 | 19 | | | |
| Tested | 1260 | 10 | | | |
| $X^2 = 6.75$, $df = 1$, $p = .01$ | | | | | |

Table 19: Association Between Tested Status (Injury-File Tested-Status Variable) and Location

Relative to the Mean of Injuries per Year: CRT-Coded Injuries

| | Less than Mean | Greater Than or Equal to Mean | | | |
|--------------------------------|----------------|----------------------------------|--|--|--|
| Not Tested | 910 | 18 | | | |
| Tested | 1246 | 11 | | | |
| $X^2 = 4.62$, df = 1, p = .03 | | | | | |

Table 20: Comparison of Average Injury Cost

| • | Not Tested Test | | Tested | sted | | |
|---|-----------------|-----------|--------|-----------|--------------|---------|
| Analysis | N | Mean | N | Mean | Cohen's D | P Value |
| DCI Coded & Tested Variable | 49 | 42,482.30 | 16 | 13,946.92 | 0.54 | 0.04 |
| DCI Coded & Injury-File Tested- Status Variable | 52 | 39,058.15 | 13 | 21,058.44 | 0.34 | 0.05 |
| CRT Coded & Tested Variable | 42 | 54,032.14 | 13 | 16,713.87 | 0.50 | 0.00 |
| CRT Coded & Injury-File Tested- Status Variable | 41 | 53,701.75 | 14 | 20,347.04 | 0.44 | 0.01 |

Table 21: Relationship Between Tested Status and Presence of Injury for Company B: DCI-Coded Injury

| Tested Status | No Injury | Injury | Total |
|----------------------|-----------|--------|-------|
| Not Tested | 376 | 6 | 382 |
| Tested | 497 | 0 | 497 |
| Total | 873 | 6 | 879 |

p = .01

Table 22: Relationship Between Tested Status and Presence of Injury for Company B: CRT-Coded Injury

| Tested Status | No Injury | Injury | Total |
|---------------|-----------|--------|-------|
| Not Tested | 379 | 3 | 382 |
| Tested | 497 | 0 | 497 |
| Total | 876 | 3 | 879 |

p = .08

Table 23: Predicting the Presence of DCI-Coded Injury with Tested Variable: Both Companies

| Variable | Estimate | Std. Error | Z Value | P value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -2.984 | 0.147 | -20.259 | 0.000 | 0.051 |
| Company | -1.421 | 0.430 | -3.303 | 0.001 | 0.242 |
| Tested | -1.473 | 0.289 | -5.105 | 0.000 | 0.229 |

 $X^2 = 47.05$, df = 2, p = .00; Nagelkerke R Squared = .079; N = 3138; For Company, Company A is the reference group; For Tested, 1 = tested, 0 = not tested, For injury, 1= injury is present, 0 = injury is not present

Table 24: Predicting the Presence of DCI-Coded Injury with Injury-File Tested-Status Variable: Both Companies

| Variable | Estimate | Std. Error | Z Value | P value | e ^B |
|----------------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -2.938 | 0.144 | -20.458 | 0.000 | 0.053 |
| Company | -1.414 | 0.430 | -3.286 | 0.001 | 0.243 |
| Tested (Injury File) | -1.720 | 0.311 | -5.532 | 0.000 | 0.179 |

 $X^2 = 55.57$, df =2, p =.00; Nagelkerke R Squared = .093; N = 3138; For Company, Company A is the reference category; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 25: Predicting the Presence of CRT-Coded Injury with Tested Variable: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -3.195 | 0.163 | -19.621 | 0.000 | 0.041 |
| Company | -1.916 | 0.596 | -3.215 | 0.001 | 0.147 |
| Tested | -1.437 | 0.321 | -4.478 | 0.000 | 0.238 |

 $X^2 = 42.14$, df = 2, p = .00; Nagelkerke R Squared = .083; N = 3138; For Company, Company A is the reference group; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present.

Table 26: Predicting the Presence of CRT-Coded Injury with Injury-File Tested-Status Variable: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|----------------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -3.234 | 0.165 | -19.647 | 0.000 | 0.039 |
| Company | -1.908 | 0.596 | -3.201 | 0.001 | 0.148 |
| Tested (Injury File) | -1.314 | 0.313 | -4.195 | 0.000 | 0.269 |

 $X^2 = 38.63$, df = 2, p = .00; Nagelkerke R Squared = .076; N = 3138; For Company, Company A is the reference group; For Tested; 1 = tested, 0 = not tested; For injury, 1= injury is present, 0 = injury is not present

Table 27: Predicting the Presence of DCI-Coded Injury with Control Variables and Tested Variable: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -18.483 | 569.457 | -0.032 | 0.974 | 0.000 |
| Company | -0.974 | 0.447 | -2.181 | 0.029 | 0.378 |
| Age | 0.016 | 0.015 | 1.065 | 0.287 | 1.016 |
| Gender | 14.176 | 569.457 | 0.025 | 0.980 | 1434580.915 |
| Tested | -1.092 | 0.342 | -3.194 | 0.001 | 0.336 |

 $X^2 = 23.15$, df =4, p =.00; Nagelkerke R squared = .054; N = 3064; For Company, Company A is the reference category; For Gender, Female is the reference category; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 28: Predicting the Presence of DCI-Coded Injury with Control Variables and Injury-File Tested-Status Variable: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|----------------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -18.210 | 563.510 | -0.032 | 0.974 | 0.000 |
| Company | -0.965 | 0.448 | -2.156 | 0.031 | 0.381 |
| Age | 0.013 | 0.015 | 0.870 | 0.384 | 1.013 |
| Gender | 14.135 | 563.509 | 0.025 | 0.980 | 1376048.281 |
| Tested (Injury File) | -1.445 | 0.370 | -3.907 | 0.000 | 0.236 |

 $X^2 = 30.18$, df =4, p=.00; Nagelkerke R Squared = .071; N = 3064; For Company, Company A is the reference category; For Gender, Female is the reference category; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 29 Predicting the Presence of CRT-Coded Injury with Control Variables and Tested Variable: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -19.947 | 926.056 | -0.022 | 0.983 | 0.000 |
| Company | -1.433 | 0.614 | -2.335 | 0.020 | 0.239 |
| Age | 0.027 | 0.018 | 1.504 | 0.133 | 1.027 |
| Gender | 14.805 | 926.055 | 0.016 | 0.987 | 2690061.634 |
| Tested | -1.103 | 0.405 | -2.721 | 0.007 | 0.332 |

 $X^2 = 21.97$, df = 4, p = .00, Nagelkerke R Squared = .067; N = 3064; For Company, Company A is the reference group; For Gender, Female is the reference group; For Tested, 1 = tested, 0 = not tested; For injury, 1 = Injury is present, 0 = injury is not present

Table 30 Predicting the Presence of CRT-Coded Injury with Control Variables and Injury-File Tested-Status Variable: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|----------------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -20.108 | 930.518 | -0.022 | 0.983 | 0.000 |
| Company | -1.426 | 0.613 | -2.325 | 0.020 | 0.240 |
| Age | 0.028 | 0.018 | 1.596 | 0.111 | 1.029 |
| Gender | 14.819 | 930.517 | 0.016 | 0.987 | 2727671.425 |
| Tested (Injury File) | -0.919 | 0.394 | -2.334 | 0.020 | 0.399 |

X² = 19.61, df =4, p = .00; Nagelkerke R Squared = .059; N = 3064; For Gender, Female is the reference category; For tested, 1 = tested, 0 = not tested; For company, Company A is the reference category; For injury, 1 = injury is present, 0= injury is not present

Table 31: Predicting the Presence of DCI-Coded Injury with Tested Variable: Both Companies Follow Up Analysis

| Variable | Estimate | Std. Error | Z Value | P value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -2.987 | 0.148 | -20.210 | 0.000 | 0.050 |
| Company | -1.552 | 0.519 | -2.991 | 0.003 | 0.212 |
| Tested | -1.459 | 0.290 | -5.027 | 0.000 | 0.232 |

 $X^2 = 47.15$, df = 2, p = .00; Nagelkerke R Squared = .081; N = 3018; For Company, Company A is the reference group; For Tested, 1 = tested, 0 = not tested, For injury, 1= injury is present, 0 = injury is not present

Table 32: Predicting the Presence of DCI-Coded Injury with Injury-File Tested-Status Variable: Both Companies Follow Up Analysis

| Variable | Estimate | Std. Error | Z Value | P value | e ^B |
|----------------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -2.941 | 0.144 | -20.423 | 0.000 | 0.053 |
| Company | -1.528 | 0.519 | -2.943 | 0.003 | 0.217 |
| Tested (Injury File) | -1.708 | 0.312 | -5.468 | 0.000 | 0.181 |

 $X^2 = 55.60$, df = 2, p = .000; Nagelkerke R Squared = .096; N = 3018; For Company, Company A is the reference category; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 33: Predicting the Presence of CRT-Coded Injury with Tested Variable: Both Companies Follow Up Analysis

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -3.206 | 0.164 | -19.512 | 0.000 | 0.041 |
| Company | -2.746 | 1.011 | -2.715 | 0.007 | 0.064 |
| Tested | -1.395 | 0.323 | -4.317 | 0.000 | 0.248 |

 $X^2 = 44.62$, df = 2, p = .00; Nagelkerke R Squared = .091; N = 3018; For Company, Company A is the reference group; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present.

Table 34 Predicting the Presence of CRT-Coded Injury with Injury-File Tested-Status Variable: Both Companies Follow Up Analysis

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|----------------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -3.246 | 0.166 | -19.524 | 0.000 | 0.039 |
| Company | -2.747 | 1.011 | -2.717 | 0.007 | 0.064 |
| Tested (Injury File) | -1.269 | 0.316 | -4.023 | 0.000 | 0.281 |

 $X^2 = 41.21$, df = 2, p = .00; Nagelkerke R Squared = .084; N = 3018; For Company, Company A is the reference group; For Tested; 1 = tested, 0 = not tested; For injury, 1= injury is present, 0 = injury is not present

Table 35: Predicting the Presence of DCI-Coded Injury with Control Variables and Tested Variable: Both Companies Follow Up Analysis

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -18.394 | 582.123 | -0.032 | 0.975 | 0.000 |
| Company | -1.097 | 0.530 | -2.069 | 0.039 | 0.334 |
| Age | 0.014 | 0.015 | 0.949 | 0.343 | 1.014 |
| Gender | 14.152 | 582.123 | 0.024 | 0.981 | 1399473.130 |
| Tested | -1.075 | 0.345 | -3.120 | 0.002 | 0.341 |

 $X^2 = 23.03$, df =4, p =.00; Nagelkerke R squared = .057; N = 2944; For Company, Company A is the reference category; For Gender, Female is the reference category; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 36: Predicting the Presence of DCI-Coded Injury with Control Variables and Injury-File Tested-Status Variable: Both Companies Follow Up Analysis

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|----------------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -18.121 | 575.924 | -0.031 | 0.975 | 0.000 |
| Company | -1.064 | 0.531 | -2.005 | 0.045 | 0.345 |
| Age | 0.011 | 0.015 | 0.763 | 0.445 | 1.012 |
| Gender | 14.108 | 575.924 | 0.024 | 0.980 | 1340098.688 |
| Tested (Injury File) | -1.434 | 0.372 | -3.853 | 0.000 | 0.238 |

 $X^2 = 29.98$, df =4, p=.00; Nagelkerke R Squared = .074; N = 2944; For Company, Company A is the reference category; For Gender, Female is the reference category; For Tested, 1 = tested, 0 = not tested; For injury, 1 = injury is present, 0 = injury is not present

Table 37: Predicting the Presence of CRT-Coded Injury with Control Variables and Tested Variable: Both Companies Follow Up Analysis

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -19.719 | 935.678 | -0.021 | 0.983 | 0.000 |
| Company | -2.223 | 1.020 | -2.179 | 0.029 | 0.108 |
| Age | 0.023 | 0.018 | 1.296 | 0.195 | 1.024 |
| Gender | 14.719 | 935.678 | 0.016 | 0.987 | 2467818.624 |
| Tested | -1.047 | 0.410 | -2.550 | 0.011 | 0.351 |

 $X^2 = 23.35$, df = 4, p = .00, Nagelkerke R Squared = .075; N = 2944; For Company, is the reference group; For Gender, Female is the reference group; For Tested, 1 = tested, 0 = not tested; For injury, 1 = Injury is present, 0 = injury is not present

Table 38: Predicting the Presence of CRT-Coded Injury with Control Variables and Injury-File Tested-Status Variable: Both Companies Follow Up Analysis

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|----------------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -19.88 | 940.06 | -0.02 | 0.98 | 0.00 |
| Company | -2.23 | 1.02 | -2.19 | 0.03 | 0.11 |
| Age | 0.03 | 0.02 | 1.38 | 0.17 | 1.03 |
| Gender | 14.73 | 940.06 | 0.02 | 0.99 | 2502956.52 |
| Tested (Injury File) | -0.86 | 0.40 | -2.14 | 0.03 | 0.42 |

 $X^2 = 21.13$, df =4, p = .00; Nagelkerke R Squared = .068; N = 2944; For Gender, Female is the reference category; For Tested, 1 = tested, 0 = not tested; For company, Company A is the reference category; For injury, 1 = injury is present, 0= injury is not present

Table 39: Predicting the Presence of DCI-Coded Injury with Company Control and Age: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -5.312 | 0.741 | -7.171 | 0.000 | 0.005 |
| Company | -0.989 | 0.444 | -2.228 | 0.026 | 0.372 |
| Age | 0.026 | 0.014 | 1.784 | 0.074 | 1.026 |

 $X^2 = 8.61$, df = 2, p = .01; Nagelkerke R Squared = .020; N = 3064; For Company, Company A is the reference category; For injury, 1 = injury is present, 0 = injury is not present

Table 40: Predicting the Presence of DCI-Coded Injury with Company Control and Gender: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -4.434 | 1.007 | -4.401 | 0.000 | 0.012 |
| Company | -1.395 | 0.430 | -3.249 | 0.001 | 0.248 |
| Gender | 0.885 | 1.013 | 0.874 | 0.382 | 2.424 |

 $X^2 = 16.73$, df = 2, p=.00; Nagelkerke R Squared = .028; N = 3138; For Gender, Female is the reference category; For Company, Company A is the reference category; For injury, 1 = injury is present, 0 = injury is not present

Table 41: Predicting the Presence of DCI-Coded Injury with Company Control, Age, and Gender: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -19.573 | 578.725 | -0.034 | 0.973 | 0.000 |
| Company | -0.965 | 0.444 | -2.172 | 0.030 | 0.381 |
| Gender | 14.269 | 578.724 | 0.025 | 0.980 | 1574072.028 |
| Age | 0.026 | 0.014 | 1.831 | 0.067 | 1.026 |

 $X^2 = 11.97$, df = 3, p = .01; Nagelkerke R Squared = .028; N= 3064; For Company, Company A is the reference category; For Gender, Female is the reference category; For injury, 1 = injury is present, 0 = injury is not present.

Table 42: Predicting the Presence of CRT-Coded Injury with Company Control and Age: Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|---------|---------|----------------|
| (Intercept) | -6.133 | 0.914 | -6.711 | 0.000 | 0.002 |
| Company | -1.433 | 0.611 | -2.345 | 0.019 | 0.239 |
| Age | 0.036 | 0.017 | 2.083 | 0.037 | 1.037 |

 $X^2 = 11.37$, df = 2, p = .00; Nagelkerke R Squared = .034; N = 3064; For Company, Company A is the reference category; For injury, 1 = injury is present, 0 = injury is not present

Table 43: Predicting the Presence of CRT-Coded Injury with Company Control and Gender:

Both Companies

| Variable | Estimate | Std. Error | Z Value | P Value | e ^B |
|-------------|----------|---------------|------------|------------|----------------|
| (Intercept) | -4.370 | 1.008 | -4.337 | 0.000 | 0.013 |
| Company | -1.895 | 0.596 | -3.182 | 0.001 | 0.150 |
| Gender | 0.617 | 1.016 | 0.607 | 0.544 | 1.853 |

 $X^2 = 18.67$, df = 2, p = .00; Nagelkerke R Squared = .037; N= 3138; For Company, Company A is the reference category; For gender, Female is the reference category; For injury, 1 = injury is present, 0 = injury is not present

Table 44: Predicting the Presence of CRT-Coded Injury with Company Control, Age, and Gender: Both Companies

| Variable | Estimate | Std. Error | Z Value | P value | e ^B |
|-------------|----------|---------------|------------|---------|----------------|
| (Intercept) | -21.024 | 941.282 | -0.022 | 0.982 | 0.000 |
| Company | -1.411 | 0.612 | -2.308 | 0.021 | 0.244 |
| Gender | 14.900 | 941.282 | 0.016 | 0.987 | 2957765.210 |
| Age | 0.037 | 0.017 | 2.123 | 0.034 | 1.037 |

 X^2 = 13.76, df = 3, p = .00; Nagelkerke R Squared = .041, N = 3064; For Company, Company A is the reference category; Female is the reference category; For injury, 1 = injury is present, 0 = injury is not present